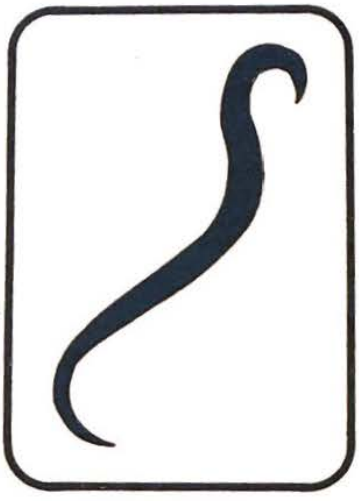
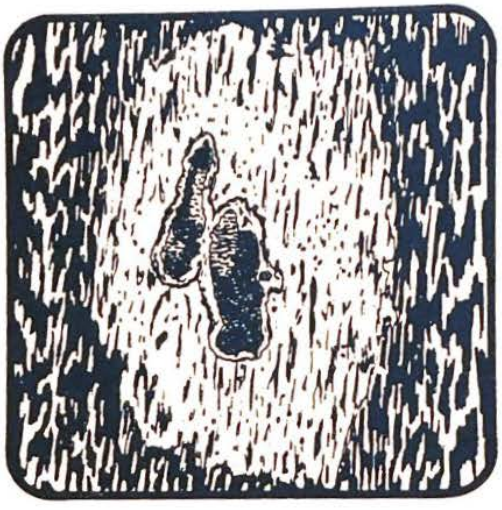
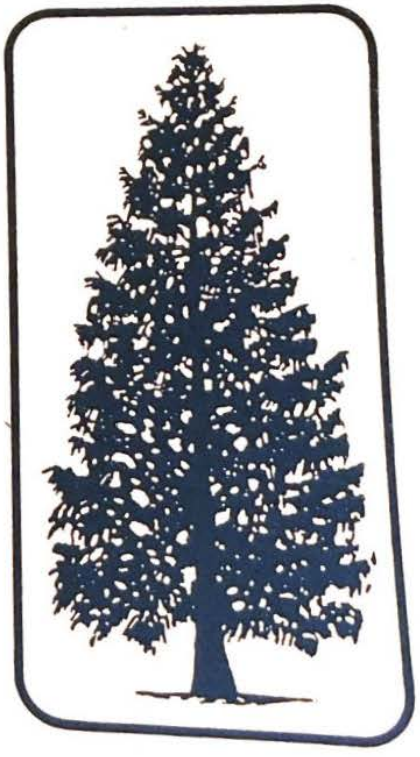
1991 Illinois Forest Pest Report







1991 Illinois Forest Pest Report

Edited by

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University of Illinois

Urbana-Champaign, Illinois
February 1992

1991 Illinois Forest Pest Report

1991-1992 Illinois Forest Pest Workshops and Exhibits

During 1991, forestry workshops were held in Oglesby and Benton, IL. on May 14, and May 23, 1991 respectively. The purpose of these workshops were to update information on the control of the economically important pests attacking trees in Illinois. Emphasis was given to field recognition of the insects and diseases. Cultural, biological, and chemical control measures were discussed. Attenders were encouraged to bring insect and disease samples to the meetings. Slides were shown on given topics followed by presentations of field samples with time for discussions.

Each year educational exhibits featuring forest insect pests are shown at seminars, trade shows, and state fairs. During 1991 an exhibit featuring the gypsy moth was shown. The exhibit was composed of colored photographs depicting the various life stages of the gypsy moth, forest damage, moth predators, parasites, and diseases, with a chart showing tree species susceptibility. Also presented was a USDA Forest Service poster which featured colored photographs of the gypsy moth life stages with information encouraging the public to be aware of the danger of transporting life stages of the gypsy moth on camping equipment, vehicles, etc. from gypsy moth infested areas. A smaller version of the USDA poster for wallet storage was distributed whenever the exhibit was shown. The exhibit and dates shown, with the number of gypsy moth cards distributed in parenthesis was presented at the following locations: Illinois State Fair, Aug. 8-18 (3000 cards), Du Quoin State Fair, Aug. 24-Sept. 2 (1000 cards), Illinois Arborist Association Chapter Seminar, Dec. 2-3 (325 cards) and American Nurserymens' Mid-Am Trade Show, Jan. 16-18, 1992 (2500 cards). The USDA poster was also distributed to the Illinois Department of Conservation which placed 75 of the posters for inside exhibition and 75 for outdoor usage in the Illinois state parks.

Maps of Forest Insects

In this section maps are presented which feature the distribution of forest and urban forestry insects which have been reported for the years of 1990 and 1991. Each year Illinois district foresters and their associates are given reporting forms which request the following information: name of insect, date collected, host plant, county, severity of infestation, number of

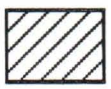
forest acres infested whether plantation or natural, and number of trees infested whether planted or natural. This information is complied into this report.

Other persons contributing reports are from the Illinois Department of Agriculture, Illinois Natural History Survey, University of Illinois, and Illinois Christmas Tree Growers Association.

If an insect specimen has been verified and deposited in the Illinois Natural History Survey (NHS) insect collection as a voucher specimen, the Illinois county has the NHS designation. Researches wishing to construct regional or national distribution maps for various insect species might find this information particularly valuable.

The map legend used in this report is as follows:

1990


1991

1990 & 1991

NHS

Shipment of Insect or Plant Specimens

Insect specimens -- Persons wishing to send insect specimens that might be added to the insect collection should include with the specimens the following information: date of collection, county and nearest city, host plant, and collector's name. Live insects should be placed in a plastic bag with enough host plant foliage to sustain the insects for at least 3-4 days of travel time. Water should not be added to the bag. The bag should then be placed in a cardboard box for shipment. Send insect specimens to: James E. Appleby, Illinois Natural History Survey, 607 E. Peabody, Champaign, IL 61820. Phone 217-244-3431.

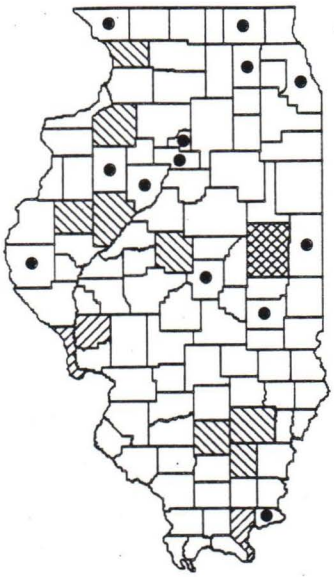
Plant specimens. -- Plant specimens showing disease symptoms should be prepared in the same manner as stated above for the insects. Send plant specimens to: Nancy Pataky, N533 Turner Hall, 1102 S. Goodwin, Urbana, IL 61801. Phone 217-333-0519.

Tree Insects in Illinois

James E. Appleby
Illinois Natural History Survey
Illinois Agricultural Experiment Station

Deciduous Tree Pests

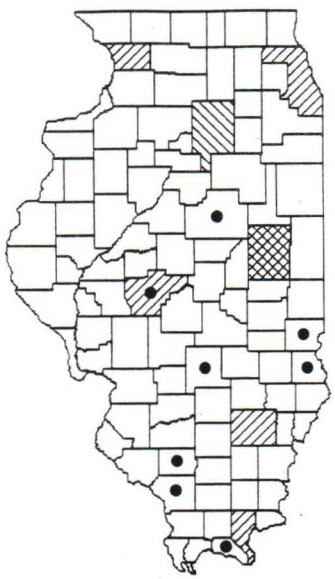
Walnut Caterpillar (*Datana integerrima*)



Moderate infestations occurred in the northern half of Illinois. This compared to light infestations in the same area in 1990. Lighter infestations occurred in the southern half as compared to moderate to heavy infestations in the area in 1990. Some trees growing on poor soils remain in a weaken state due to the severe drought of 1988 and lighter than normal amounts of precipitation in 1989. Walnut growers should examine trees at weekly intervals during July and August for infestations. Foliar sprays of *Bacillus thuringiensis* will give good control.

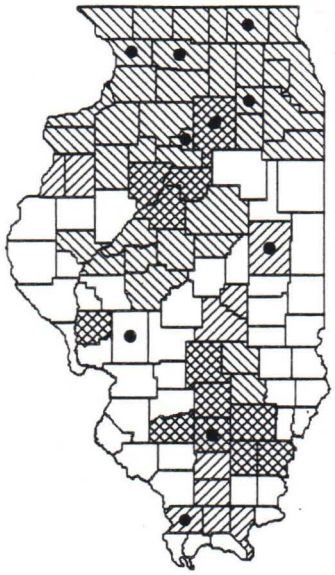
Contributors: Jim Appleby, and Tom Wilson.

Elm Leaf Beetle (*Pyrrhalta luteola*)



Light infestations of the elm leaf beetle occurred in northern Illinois while moderate to heavy infestations occurred in central Illinois. Foliar sprays of carbaryl (Sevin) or *Bacillus thuringiensis* strain *san diego* will give control.

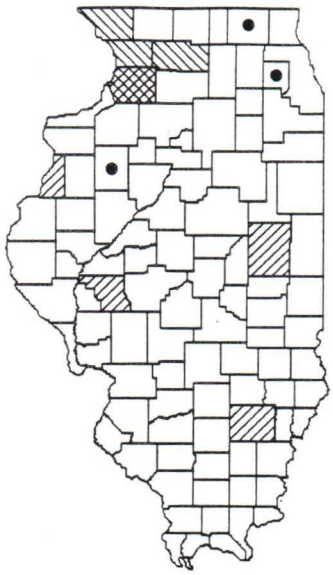
Contributors: Jim Appleby, Ralph Eads, David Johnson, Joe Roush, and Pete Skuba.



Eastern Tent Caterpillar (*Malacosoma americanum*)

The 1991 season is the fifth consecutive year in which populations of this insect have been very high in most areas. Only a few light areas were reported in the northern, far western, and far southern Illinois. Moderate to heavy infestations were reported in most areas. Black cherry and crabapple were the host trees reported. Black cherry seems to be able to tolerate complete defoliation without much lasting damage. Therefore control measures are not needed.

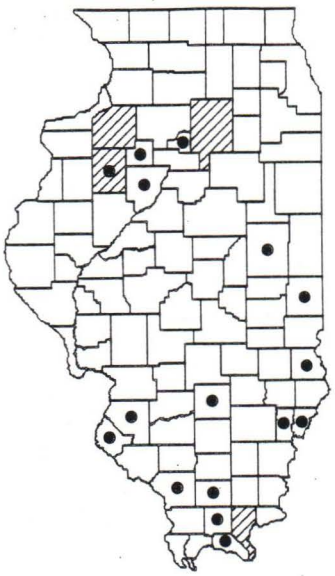
Contributors: Jim Appleby, Mark Brown, David Johnson, Mark Kock, Barrie McVey, Jerry Pirtle, Joe Roush, Randy Timmons, and Tom Wilson.



Bronze Birch Borer (*Agrilus anxius*)

Large numbers of birch trees died during 1989, and many trees remain in a weakened state due to the severe drought of 1988. Birch trees must be mulched, fertilized, and watered during drought periods to keep the trees in a vigorous growing condition. Trees that are well maintained and sprayed with chlorpyrifos (Dursban) in early June, and early July will generally continue to improve. Moderate to light infestations were reported in areas of central and northern Illinois.

Contributors: Jim Appleby, Ralph Eads, David Johnson, Barrie McVey, and Tom Wilson.



Mimosa Webworm (*Homadaula anisocentra*)

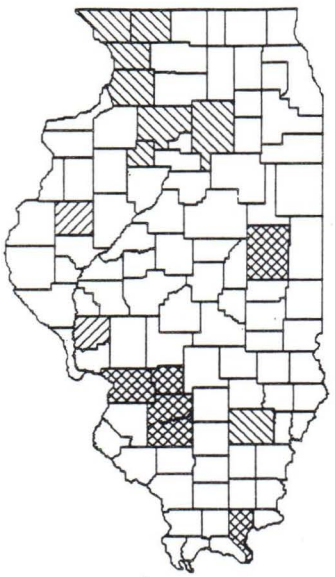
Since 1986 populations of this insect have been very low. In 1990 no reports were indicated. Many years ago this insect had high populations in central and southern Illinois on thornless honeylocust and mimosa. In 1991, moderate to heavy infestations were reported in some areas of northern and central Illinois on honey locust. When the webs are still small, foliar sprays of *Bacillus thuringiensis*, malathion and or carbaryl (Sevin) will give good control.

Contributors: Jim Appleby, Mark Brown, Stephen Felt, and Randy Timmons.

Oystershell Scale (*Lepidosaphes ulmi*)

Only two reports of this scale were indicated for 1991. Heavy infestations were reported on silver maple and lilac in northwestern Illinois and heavy infestations on crab apple in central Illinois. This scale is easily controlled with a full coverage spray in mid June using a superior grade horticultural oil, malathion, or diazinon.

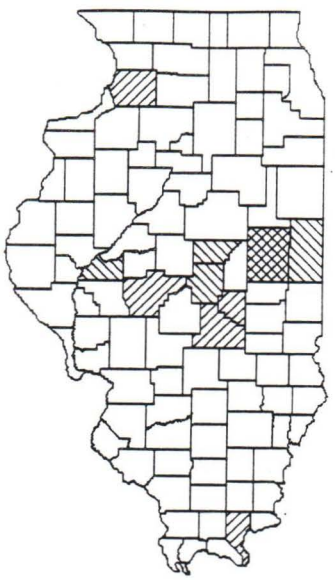
Contributors: Jim Appleby and Ralph Eads.



Fall Webworm (*Hyphantria cunea*)

Light infestations were reported in most areas in 1990 and the same was indicated for 1991. Walnut, mulberry, black cherry, and hickory were host trees. Control is usually not necessary.

Contributors: Jim Appleby, Mark Kock, Barrie McVey, and Tom Wilson.



Yellownecked Caterpillar (*Datana ministra*)

Light infestations were reported on pin oak from central and southern Illinois. Some trees can be completely defoliated by this caterpillar during July and August. Foliar sprays of *Bacillus thuringiensis*, carbaryl (Sevin), and or malathion will control the larvae.

Contributors: Jim Appleby, Ralph Eads, and Pete Skuba.

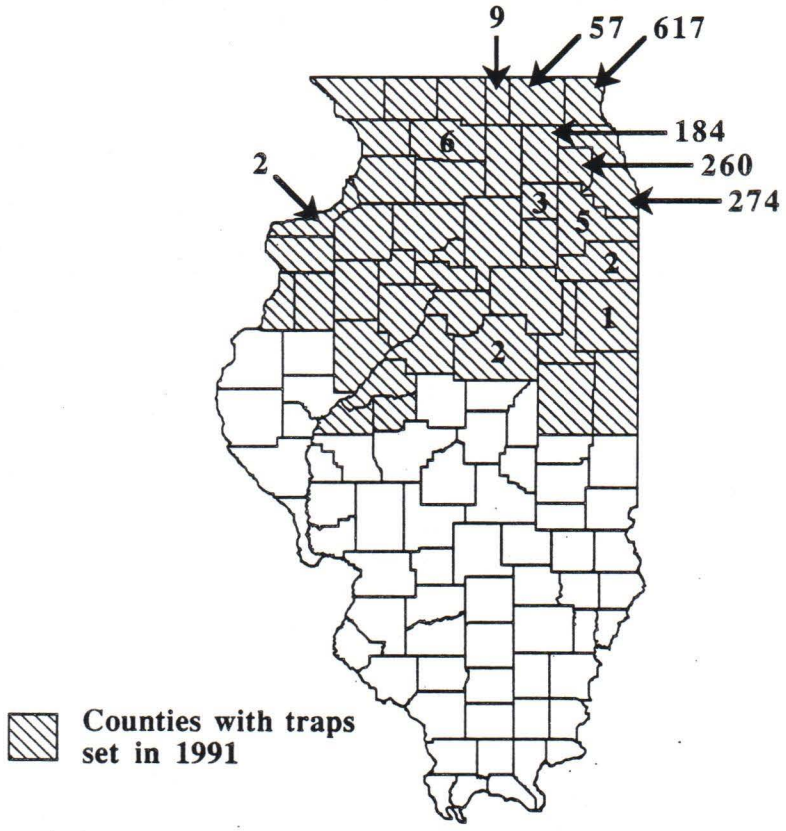
Gypsy Moth (*Lymantria dispar*)

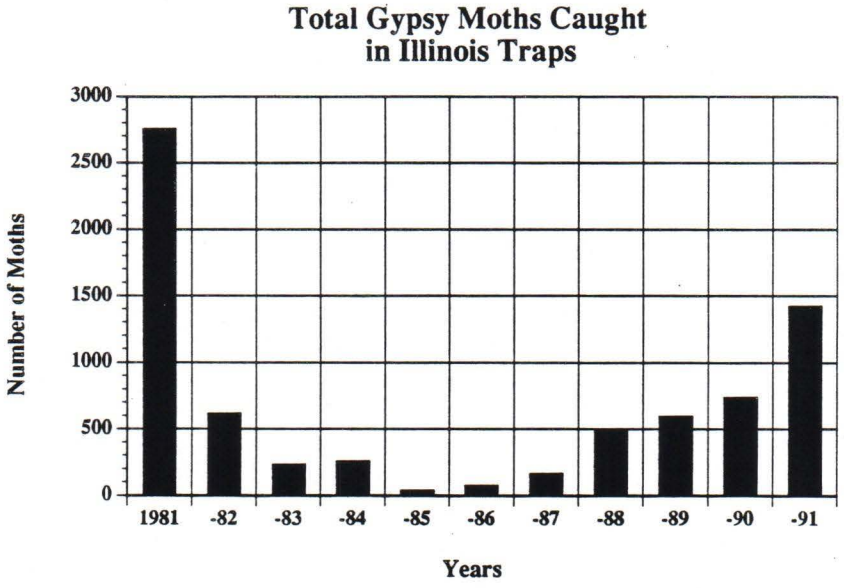
To date there are no known areas within Illinois where severe tree defoliation has resulted from the gypsy moth. Since 1985 the number of adult male moth catches in traps has increased, with the total moth catch in 1991 being 1422. The 1991 moth catch is the second largest catch ever recorded in Illinois. The 1991 catch was from traps set within the northern half of Illinois. Some of the male moths caught along the Lake Michigan counties may have been blown into Illinois on strong wind currents.

Egg masses of the gypsy moth have accidentally entered Illinois on such items as firewood logs, lawn furniture, camping equipment, bird feeders, plants, etc. from states that have active infestations of the moth. During 1991 nursery plants infested with egg masses were shipped from a nursery in Pennsylvania to Illinois. According to personnel of the Illinois Department of Agriculture all the egg masses were finally located and destroyed.

Because of the more stringent FAA regulations for the use of helicopter applications of insecticides over urban areas, the cost of operations has increased substantially resulting in nearly prohibitive costs for agencies. To the present date, aerial applications of *Bacillus thuringiensis* have successfully suppressed gypsy moth infestation sites within Illinois. The excellent control programs operated by the Illinois Department of Agriculture personnel in cooperation with USDA APHIS PPQ, have kept the gypsy moth under control to date. Whether this program can continue to be successful will depend greatly on adequate funding for control programs in all communities. If a few communities vote not to participate in control programs then it is inevitable that the moth will quickly spread and the program of containment will be over.

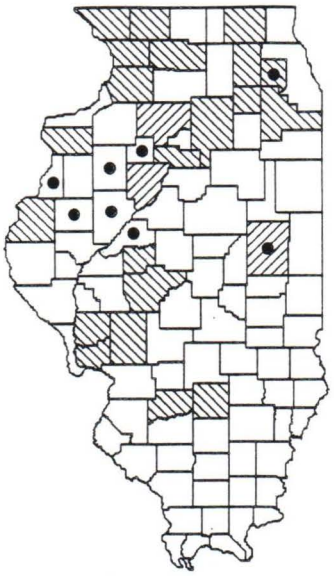
1422 Gypsy Moths Caught in 1991 in Illinois





(Chart based on information from the Il. Dept. of Agriculture.)

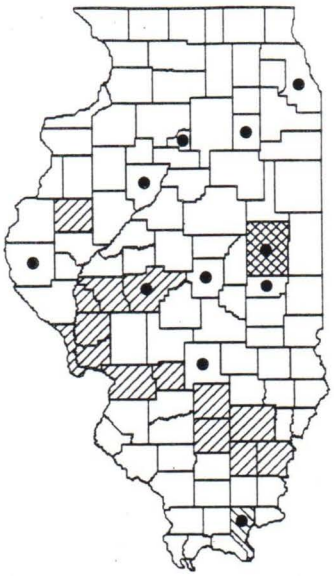
Evergreen Pests



European Pine Sawfly (*Neodiprion sertifer*)

Light to moderate infestations were reported in central Illinois. Last year, in the same area, heavy infestations occurred. *Bacillus thuringiensis* will not control this insect, but carbaryl (Sevin), or malathion will give good control. Plantations should be inspected at weekly intervals during April and May for infestations.

Contributions: Jim Appleby and Joe Roush.



Bagworm (*Thyridopteryx ephemeraeformis*)

In contrast to the general light infestations in 1990, in 1991 infestations in most areas of central and southern Illinois were moderate to heavy. Host plants reported were blue spruce, spruce, white pine, Scotch pine, cedars, shingle oak, maple, and silky dogwood. Complete defoliation of an evergreen generally results in the death of the plant. *Bacillus thuringiensis,* carbaryl, malathion, and/or diazinon will give control. For best control apply in early to mid June.

Contributors: Jim Appleby, David Johnson, Mark Kock, Tom Lamer, Barrie McVey, Pete Skuba, Tony Wagner, and Tom Wilson.

Pine Needle Scale (*Chionaspis pinifoliae*)

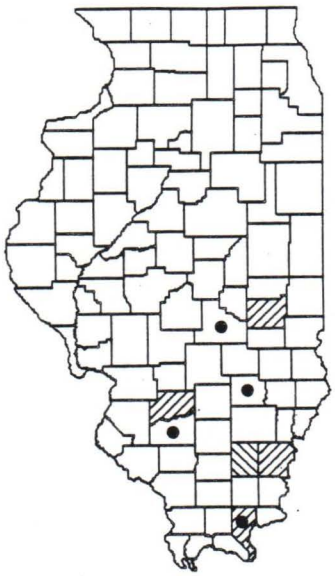
In general, infestations were light throughout the state, however there were isolated high populations. Control can be accomplished with a superior oil spray, malathion, or diazinon applied in mid May after all the overwintering eggs have hatched.

Contributors: Ralph Eads and Mark Kock.

Pales Weevil (*Hylobius pales*)

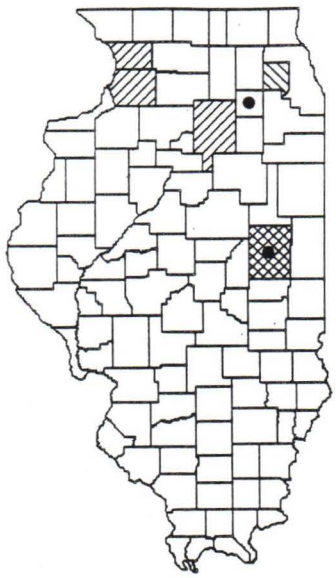
New plantations where there have been no pines planted for at least two years are generally free from any problems with this insect. Problems begin usually after trees are harvested over a period of years. Fresh pine stumps and slash serve as sites for the development of the larvae. High mortality of seedling trees and severe branch damage of larger trees can occur with moderate infestations of this weevil. Spray applications of chlorpyrifos (Dursban) in early to mid March to pine stumps is advisable. It is always better to apply the insecticide early rather than later as it is desirable to kill the adults before they have a chance to deposit eggs on the stumps. Chlorpyrifos residue will be effective for at least 4 weeks. Where this weevil has had a history in a certain plantation of causing problems, it might be necessary in such plantations to spray the seedling trees in mid-July as well as the trees that may be harvested that same year. White pine is the preferred host, but damage may also occur on Scotch, Austrian, Douglas fir, and spruce species.

Contributors: Jim Appleby and Kurt Bobsin



Redheaded Pine Sawfly (*Neodiprion lecontei*)

Populations of this insect vary considerably from year to year. No reports were received for 1988 or 1989, and only a light infestation was found in one county in 1990. Light to moderate infestations were reported in 1991 in 3 Illinois counties. This species is also very unpredictable on when larvae will be present. The dates in 1991 when larval stages were found are as follows: April 23, June 22, and Sept. 30. In all three instances, Scotch pine was the host tree species. Foliar sprays of malathion or carbaryl (Sevin) will give control when larvae are noted. *Bacillus thuringiensis* will not control sawflies.



Zimmerman Pine Moth (*Dioryctria zimmermani*)

Heavy infestations of this moth continue to occur in plantations where control measures have not been used. Frequently the terminal branch and side branches along the tree trunk will die. This insect is most often a pest in the northern half of Illinois. Scotch, red, Austrian, and white pines are attacked. The most ideal time to accomplish control is with a foliar and trunk spray of chlorpyrifos (Dursban) in late July or early August. Some control has resulted with sprays applied in mid March. Treatments at other times are ineffective as the borer larvae are established in the wood and thereby protected.

Contributors: Jim Appleby, Kurt Bobsin, Mark Brown, Ralph Eads, and Randy Timmons.

Miscellaneous Insect Reports

Illinois Counties	Insect	Host	Date in 1991	Degree of Infes-tation *	Contributors
Bond	Aphid	Ash, red oak	25-Jun	H	Mark Kock
Carroll	"	Blue spruce	8-Jul	L	Ralph Eads
Henderson	"	Maples	27-Jun	M	Barrie McVey
LaSalle	"	Apple	7-Jun	H	R.Timmons,Mark Brown
LaSalle	"	Apple	24-Jun	H	R.Timmons,Mark Brown
Marion	"	Ash	Jun	M	Tony Wagner
McDonough	"	Maples	17-Jun	M	Barrie McVey
Stephenson	"	Black walnut	22-Jun	L	Ralph Eads
Whiteside	"	Basswood	3-Jun	L	Ralph Eads
Whiteside	"	Norway maple	8-Jul	M	Ralph Eads
Whiteside	"	Sugar maple	23-Jul	H	Ralph Eads
Calhoun	Ash yellows	White ash	15-Jul	M	Thomas Wilson
Henry	Bug cutting holes in foliage	Oak	Jun	M	Stephen Felt
Knox	"	Oak	Jun	M	"
Mercer	"	Oak	Jun	M	"
LaSalle	Carpenter ants	Basswood	3-Sep	H	R.Timmons,Mark Brown
LaSalle	"	Cottonwood	3-Sep	H	R.Timmons,Mark Brown
Whiteside	"	Silver maple	Sep	L	Ralph Eads
Stephenson	Cooley spruce gall aphid	Blue spruce	2-Jul	L	Ralph Eads
Bureau	Cottony maple scale	Soft maple	9-Jul	M	R.Timmons,Mark Brown
LaSalle	"	Apple	24-Jun	L	R.Timmons,Mark Brown
Whiteside	"	Silver maple	24-Jun	M	Ralph Eads
Will	"	Soft maple	6-Jul	H	R.Timmons,Mark Brown
Bureau	Eastern pine shoot borer	Scotch pine	1-Jun	M	R.Timmons,Mark Brown
Carroll	Elm leafminer	Red elm	4-Jun	M	Ralph Eads
Whiteside	Eriophyid mites	Silver maple	24-Jun	L	Ralph Eads
Tazewell	Hackberry lace bug	Hackberry	Jul-91	H	Joe Roush
Mason	"	"	Jul-91	H	Grant Haley
Monroe	"	"	Jul-91	H	Tom Seals
Randolph	"	"	Jul-91	H	Tom Seals
St. Clair	"	"	Jul-91	H	Tom Seals
Carroll	Leaf feeder	Red oak	30-Jul	L	Ralph Eads
Marion	Leaf roller	Hickory	Jun-91	L	Tony Wagner
Greene	Leaf roller	White ash	30-Jun	L	Tom Wilson

Illinois Counties	Insect	Host	Date in 1991	Degree of Infes-tation *	Contributors
Whiteside	Lecanium scale	Silver maple	24-Jun	M	Ralph Eads
Pike	"	Maple	10-May	L	Bob Church
Stephenson	Midge	Black walnut	22-Jun	H	Ralph Eads
Bureau	Oak leafminer	Pin Oak	11-Jun	M	R.Timmons,Mark Brown
Monroe	Oak leaf tier	Shingle oak	Jul-91	H	Tom Seals
Randolph	"	"	Jul-91	H	Tom Seals
St. Clair	"	"	Jul-91	H	Tom Seals
Wayne	Pine bark aphid	White pine	31-Jul	M	David N. Johnson
Shelby	Root collar weevil	White pine	26-Jun	L	Dale Donahoo
Henry	Oak sawfly	Pin oak	3-Jul	L	Stephen Felt
Whiteside	Spittle bug	Basswood	3-Jun	L	Ralph Eads
Carroll	Spruce bud scale	Blue spruce	22-Jun	M	Ralph Eads
Whiteside	"	"	11-Jun	M	Ralph Eads
Carroll	Spruce spider mite	"	22-Jun	H	Ralph Eads
LaSalle	"	Red cedar	2-Jul	H	R.Timmons,Mark Brown
LaSalle	Termites	Soft maple	26-Jun	H	R.Timmons,Mark Brown
Jo Daviess	White pine sawfly	"	28-Jun	M	Ralph Eads
Carroll	Woodpecker (sapsucker)	White birch	22-Apr	L	Ralph Eads
Carroll	Wooly maple scale	Sugar maple	12-Sep	H	Ralph Eads

*L - Light
M - Moderate
H- Heavy

Tree and Shrub Problems Diagnosed at the University of Illinois Plant Clinic -- 1991

Nancy R. Pataky
University of Illinois
Plant Pathology Department

The following is a listing of all of the tree and shrub problems diagnosed at the Plant Clinic in 1991. There are also a few additions from foresters throughout Illinois. This year's listing organizes samples by host, problem, and forestry district in which the problem occurred. Contact the Plant Clinic if you would like to see the report of the same samples by specific county of occurrence.

These samples are not solicited and do not represent a statistical sampling of tree and shrub problems in Illinois. Instead, these are samples that were submitted to the Plant Clinic by individuals, extension advisers, foresters, agribusiness personnel, and professors. There were a total of 566 samples in this category of trees and shrubs. That number is approximately 17% of all plant samples received at the Plant Clinic in 1991.

The number of samples found positive for Dutch Elm Disease, Oak Wilt, and Pinewood Nematode has increased since 1988. The distribution within the state, however, shows no significant trend. There appears to be a slight indication of these diseases "moving" south. It is more likely that the diseases were always there but are now being reported even in the south.

Verticillium Wilt on Maple has shown a decline since 1988. It is possible that there has been less stress on the Maples and thus less incidence of Verticillium. It is also possible that more people can identify the disease without sending it to the lab. As stated above, this reporting is not the result of a state-wide survey.

Host	Problem	District in Which Reported (Incidence)																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Apple(22)	Apple Scab(7)	1			2		1	1		1					1								
	Cedar Apple Rust	2																					
	Codling Moth						1																
	Drought Injury						1																
	Environmental			1																			
	Fire Blight(8)		1				1	1		1	1						1		1			1	
	Powdery Mildew										1												
	Scorch				1																		
Apricot(2)	Chemical Injury										1												
	Environmental																	1					
Arborvitae	Environmental										2												
Ash(23)	Anthracnose	1			2																		
	Ash Decline (?)				1																		
	Ash Plant Bug	1																					
	Ash Yellows (?)	1												1									
	Chemical Injury				2					1													
	Drought					3																	
	Environmental(5)				1	1	1			1	1												
	Mycoplasma (?)			1																			
	Oystershell Scale										1												
	Scorch	1																					
	Stress Canker								1														
	Vascular Wilt		1																				
Beech(1)	Phomopsis Canker							1															
Birch(6)	Actinopelte Spot										1												
	Chemical injury				1						2												
	Drought stress				1																		
	Scorch										1												
Buckeye(1)	Rust										1												
Boxwood(1)	Environmental									1													
Catalpa(2)	Powdery Mildew															1							
	Verticillium Wilt										1												
Cedar(3)	Cedar Apple Rust				1												1						
	Environmental										1												

Host	Problem	District in Which Reported (Incidence)																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Cherry(4)	Cherry Leaf Spot										1						1						
	Environmental										1												
	Fire Blight										1												
Chestnut(1)	Fungal Canker	1																					
Cork Tree	Verticillium(?)										1												
Crabapple 6	Apple Scab							1			1						1						
	Chemical injury							1															
	Environmental				1																		
	Phoma fungus										1												
Cypress(2)	Winter injury							1			1												
Dogwood(9)	Anthracnose Spot										1								1				
	Cankers							1															
	Environmental				1			1			1												
	Oystershell Scale										1												
	Phomopsis Canker																		1				
	Septoria Spot									1													
Douglasfir	Chemical injury				1																		
	Environmental				1																		
	Frost damage									1													
Elm(45)	Drought				1																		
	Dutch Elm Disease	2	2	6	11	2		5		1	1						1			2			
	Elm Leaf Beetle									1	1												
	Fungal Leaf Spot					1																	
	Ice Storm injury										1												
	Leaf Blister										1												
	Phloem Necrosis	1																					
	Scorch(5)													5									
Fir(6)	Canker disease		1																				
	Environmental				1			1			1												
	Scorch						1																
	Spider Mites										1												
Hawthorn	Hawthorn Rust										1									1			
	Mealy Bug Injury						1																

Host	Problem	District in Which Reported (Incidence)																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Hackberry	Chemical Injury				1																		
	Drought				1																		
	Environmental	1																					
	Iron Chlorosis															4							
Hickory(5)	Anthracnose														1								
	Borer injury	1																					
	Chemical						1																
	Eriophyid Mite																		1				
	Midge Gall							1															
Honeylocust	Drought				1																		
Juniper(9)	Environmental										2												
	Phomopsis(4)	1			1						1									1			
	Quince Rust							1			1												
	Spider Mites										1												
Lilac(3)	Environmental				1						1												
	Oystershell scale										1												
Linden(3)	Botryosphaeria														1								
	Chemical injury				1																		
	Fungal leaf spot							1															
Locust(1)	Valsa Canker										1												
Magnolia(2)	Chemical injury	1																					
	Sassafras Weevil										1												
Maple(53)	Anthracnose(7)		1	1				1					2				1			1			
	Bark Beetles							1															
	Chemical injury				1					1	1												
	Cicada injury							1															
	Cottony Scale								1	1			1										
	Drought injury(4)	1			1		1										1						
	Environmental(11)	1				2					4		2	1					1				
	Eriophyid mites												2										
	Iron Chlorosis			1																			
	Scale											1											
	Scorch(7)				1		2							3		1							
	Spring Tatter	1			1																		
	Verticillium(10)	2				2	1	1			2			1	1								

Host	Problem	District in Which Reported (Incidence)																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Mountain Ash(2)	Fire Blight				1																		
	Iron Chlorosis	1																					
Oak(84)	Actinopelte Spot							1			5			1	1	1							
	Anthracnose										2												
	Canker Dieback														2								
	Carpenter Ants						1																
	Chemical injury			1	1		3				1				1		2						
	Compaction		1																				
	Decline						1																
	Drought stress(4)		1			3																	
	Environmental			1											1				1				
	Iron Chlorosis 15			2			1	1			4		1	4		2							
	Leaf Blister(4)						2				1			1									
	Leaf Miner	1																					
	Oak Gall Scale							1															
	Oak Wilt(15)	2	1					6			1		2		1			2					
	Powdery Mildew													1									
	Scorch(11)	1			1			1			1			7									
	Sphaeropsis(3)							1			1						1						
	Thrips				1																		
Peach(6)	Bacterial spot						1																
	Environmental				1						1												
	Peach Leaf Curl						1																
	Peach Scab			1																			
	Plum Cucurlio												1										
Pear(11)	Bacterial Blast			1																			
	Chemical injury										1												
	Drought stress									1													
	Environmental										2												
	Fire Blight(4)						1				1									2			
	Nectria Canker										1												
	Scorch										1												
Pine(151)	Air Pollutant						1																
	Bagworm injury										1												
	Brown Spot									2													
	Chemical injury 6					1		1		1			1				2						
	Cold injury(4)	1	1							1	1												
	Cytospora Canker							1		1													
	Diplodia Blight (Sphaeropsis)	2	2		2	1	3	5	1	6	9	3				3							

Host	Problem	District in Which Reported (Incidence)																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Pine(cont.)	Dothistroma											1											
	Drought stress(5)		1			3	1																
	Environmental(28)	1	1		1	2	4	3		2	5	1		1	1	1	2			1		2	
	Needlecast							2															
	Northern Weevil										1												
	Pales Weevil						1										1						
	Phytophthora															1							
	P. Bark Aphid																		1				
	P. Needle scale	1									1												
	P. Nematode +			1	3	1	1	6		5		2			1	1		1		1			
	P. Nematode -		2		6		2	4		3	2	2				4							
	Scorch(6)							1				2	1			1						1	
	Zimmerman Moth				1																		
Plum(3)	Black Knot																					1	
	Environmental	1						1															
Poplar(1)	Cytospora canker				1																		
Redbud(4)	Cankers						1																
	Chemical injury									1													
	Leafhopper injury					1																	
	Verticillium					1																	
Rose(3)	Rosette virus												2			1							
Spruce(45)	Bagworm injury															1							
	Chemical injury	1	2			1		1			1												
	Cytospora canker	3			1			2			3												
	Drought injury	1						2															
	Environmental(13)		4					2		4	1				2								
	Frost injury							1															
	Pine Needle Scale							1															
	Sphaeropsis										1												
	Spider Mites(9)	2					1				5						1						
	Winter fleck							1															
Sweetgum(5)	Chemical injury				1						2												
	Environmental																1						
	Iron Chlorosis			1																			
Sycamore(8)	Anthracnose						3							5									
Walnut(4)	Drought stress				1	3																	

Host	Problem	District in Which Reported (Incidence)																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Willow(3)	Canker							1															
	Cytospora			1																			
	Spot Anthracnose										1												
Yew(9)	Environmental				1		1	4		1													
	Rhizoctonia							1															
	Scorch									1													

Total Number of Samples = 566